

Please note, began holding a session with Dialog on 2/27/2008 7:33:34 PM
Ligon
*** It is now 3/12/2008 4:26:50 PM ***

Welcome to DialogLink - Version 5 Revolutionize the Way You Work!

New on Dialog

Order Patent and Trademark File Histories Through Dialog

Thomson File Histories are now available directly through *Dialog*. Combined with the comprehensive patent and trademark information on *Dialog*, file histories give you the most complete view of a patent or trademark and its history in one place. When searching in the following patent and trademark databases, a link to an online order form is displayed in your search results, saving you time in obtaining the file histories you need.

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- CLAIMS/Current Patent Legal Status (File 123)
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- Chinese Patent Abstracts in English (File 344)
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- Derwent World Patents Index (for users in Japan) (File 352)
- Derwent World Patents Index First View (File 331)
- Derwent World Patents Index (File 351)
- Derwent World Patents Index (File 350)
- Ei EnCompassPat (File 353)
- European Patents Fulltext (File 348)
- French Patents (File 371)
- German Patents Fulltext (File 324)
- IMS Patent Focus (File 447, 947)
- INPADOC/Family and Legal Status (File 345)
- JAPIO - Patent Abstracts of Japan (File 347)
- LitAlert (File 670)
- U.S. Patents Fulltext (1971-1975) (File 652)
- U.S. Patents Fulltext (1976-present) (File 654)
- WIPO/PCT Patents Fulltext (File 349)

- TRADEMARKSCAN - U.S. Federal (File 226)

DialogLink 5 Release Notes

New features available in the latest release of DialogLink 5 (August 2006)

- Ability to resize images for easier incorporation into DialogLink Reports
- New settings allow users to be prompted to save Dialog search sessions in the format of their choice (Microsoft Word, RTF, PDF, HTML, or TEXT)
- Ability to set up Dialog Alerts by Chemical Structures and the addition of Index Chemicus as a structure searchable database
- Support for connections to STN Germany and STN Japan services

Show Preferences for details

? Help Off Line

* * *

Connecting to - Dialog - 291942

Connected to Dialog via SMS003002768

? b 15,9,623,810,275,624

[File 15] ABI/Inform(R) 1971-2008/Mar 12

(c) 2008 ProQuest Info&Learning. All rights reserved.

[File 9] Business & Industry(R) Jul/1994-2008/Mar 10

(c) 2008 The Gale Group. All rights reserved.

[File 623] Business Week 1985-2008/Mar 11

(c) 2008 The McGraw-Hill Companies Inc. All rights reserved.

[File 810] Business Wire 1986-1999/Feb 28

(c) 1999 Business Wire . All rights reserved.

[File 275] Gale Group Computer DB(TM) 1983-2008/Mar 05

(c) 2008 The Gale Group. All rights reserved.

[File 624] McGraw-Hill Publications 1985-2008/Mar 12

(c) 2008 McGraw-Hill Co. Inc. All rights reserved.

**File 624: Homeland Security & Defense and 9 Platt energy journals added Please see HELP NEWS624 for more*

?

? s generate(s)library(s)object

326516 GENERATE
159222 LIBRARY
148727 OBJECT
S1 141 S GENERATE(S) LIBRARY(S) OBJECT

? s s1(s) data
141 S1
2391430 DATA
S2 40 S S1(S) DATA

? s 2 (s) cardinal
3545637 2
10553 CARDINAL
S3 1351 S 2 (S) CARDINAL

? s s2(s) cardinal
40 S2
10553 CARDINAL
S4 0 S S2(S) CARDINAL

? t s2/free/1-40

2/8/1 (Item 1 from file: 15) [Links](#)
ABI/Inform(R)

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02732475 536176591

USE FORMAT 7 OR 9 FOR FULL TEXT

An Architecture for Behavior-Based Library Recommender Systems

Word Count: 6262

Dec 2003

Geographic Names: Germany

Descriptors: Library science; Bibliographic data bases; Data collection; Stochastic models;
Library cataloging; Academic libraries

Classification Codes: 9175 (CN=Western Europe); 5240 (CN=Software & systems); 8306
(CN=Schools & educational services)

Print Media ID: 17511

2/8/2 (Item 2 from file: 15) [Links](#)

ABI/Inform(R)

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01362411 00-13398

****USE FORMAT 7 OR 9 FOR FULL TEXT****

Visual C plus plus 4.2 Enterprise Edition

Word Count: 180 Length: 1 Pages

Jan 27, 1997

Company Names:

Microsoft Corp (Duns: 08-146-6849 Ticker: MSFT)

Geographic Names: US

Descriptors: Software reviews; Computer upgrading; C language; Computer programming;

SQL

Classification Codes: 9190 (CN=United States); 9000 (CN=Short Article); 5240

(CN=Software & systems); 9120 (CN=Product specific)

2/8/3 (Item 3 from file: 15) [Links](#)

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01276853 99-26249

****USE FORMAT 7 OR 9 FOR FULL TEXT****

Visual C plus plus adds SQL, boosts client/server appeal

Word Count: 416 Length: 1 Pages

Aug 19, 1996

Company Names:

Microsoft Corp (Duns: 08-146-6849 Ticker: MSFT)

Geographic Names: US

Descriptors: Object oriented programming; C language; Product testing; Software reviews;

Computer upgrading

Classification Codes: 9190 (CN=United States); 5240 (CN=Software & systems); 7500

(CN=Product planning & development)

2/8/4 (Item 4 from file: 15) [Links](#)

ABI/Inform(R)

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00559905 91-34262

Defining and Implementing Fortran Generic Abstract Data Types

Length: 11 Pages

May 1991

Descriptors: FORTRAN ; Data base management systems; Implementations; Computer programming

Classification Codes: 9130 (CN=Experimental/Theoretical); 5240 (CN=Software & systems)

2/8/5 (Item 1 from file: 9) [Links](#)

Business & Industry(R)

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01543435 Supplier Number: 24259326

ORIGINALSIM READIES NT SIMULATION TOOLS

May 13, 1998

Word Count: 465

Industry Names: Applications software; Software

Product Names: Manufacturing, engineering or design software packages (737272)

Concept Terms: All company; All market information; All product and service information;

Company forecasts; Financial data; Product development; Sales

Geographic Names: Canada (CDA); Canada (CDAX); North America (NOAX)

2/8/6 (Item 2 from file: 9) [Links](#)

Business & Industry(R)

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00570203 Supplier Number: 23076358 (USE FORMAT 7 OR 9 FOR FULLTEXT)

Software Gives Object Apps Access to DBMSs

November 14, 1994

Word Count: 455

Company Names: ONTOS INC

Industry Names: Applications software; Software

Product Names: Database software packages (737265)

Concept Terms: All product and service information; Product introduction

Geographic Names: North America (NOAX); United States (USA)

2/8/7 (Item 3 from file: 9) [Links](#)

Business & Industry(R)

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00564919 Supplier Number: 23075723 (USE FORMAT 7 OR 9 FOR FULLTEXT)

One Face For Interface Tools: Lines Are Blurring Between Formerly Distinct Interface-Builder Categories

November 14, 1994

Word Count: 2139

Special Features: Table

Company Names: INTEGRATED COMPUTER SOLUTIONS; SUNSOFT INC (SUN MICROSYSTEMS INC); VISUAL EDGE SOFTWARE LTD

Industry Names: Software

Product Names: Operating systems software packages (737221)

Concept Terms: All company; All intellectual property; All market information; All product and service information; Distribution license; Foreign business; Market share; Market size; Product development; Trends

Geographic Names: Canada (CDA); Canada (CDAX); North America (NOAX); United States (USA)

2/8/8 (Item 1 from file: 275) [Links](#)

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02505645 Supplier Number: 74991729 (Use Format 7 Or 9 For FULL TEXT)

A Better Connection.(Ontos ObjectSpark 4.1.1)(Product Information)

May 7 , 2001

Word Count: 1257 Line Count: 00110

Company Names: Ontos Inc.--Products

Descriptors: Object-oriented programming; DBMS; Product description/specification

Product/Industry Names: 7372421 (DBMS)

SIC Codes: 7372 Prepackaged software

NAICS Codes: 51121 Software Publishers

Trade Names: Ontos ObjectSpark 4.1.1 (DBMS)--Usage; Ontos ObjectSpark 4.5 Beta (DBMS)-- Product introduction

File Segment: CD File 275

2/8/9 (Item 2 from file: 275) [Links](#)

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02338834 Supplier Number: 56029112 (Use Format 7 Or 9 For FULL TEXT)

Application Development Made Easier Through Patterns.(Sterling Software's
COOL:Plex development software)(Software Review)(Evaluation)

Sept 30 , 1999

Word Count: 3790 Line Count: 00290

Company Names: Sterling Software Inc.--Products

Geographic Codes/Names: 1USA United States

Descriptors: CASE software; Software single product review

Event Codes/Names: 350 Product standards, safety, & recalls

Product/Industry Names: 7372511 (CASE Software)

NAICS Codes: 51121 Software Publishers

Trade Names: COOL:Plex (CASE software)--Evaluation

File Segment: CD File 275

2/8/10 (Item 3 from file: 275) [Links](#)

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02243776 Supplier Number: 53238446 (Use Format 7 Or 9 For FULL TEXT)

ORACLE PLANS NEW MEANING FOR ONE MEANING.

Nov 18 , 1998

Word Count: 1293 Line Count: 00104

Company Names: One Meaning Inc.; Oracle Corp.; Software One Ltd.

Geographic Codes/Names: 1USA United States

Product/Industry Names: 7372000 (Computer Software); 7372425 (Data Warehousing Software)

SIC Codes: 7372 Prepackaged software

Ticker Symbols: ORCL

File Segment: CD File 275

2/8/11 (Item 4 from file: 275) Links

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02175131 Supplier Number: 20593808 (Use Format 7 Or 9 For FULL TEXT)

ORIGINALSIM READIES NT SIMULATION TOOLS.

May 13 , 1998

Word Count: 514 Line Count: 00045

File Segment: CD File 275

2/8/12 (Item 5 from file: 275) [Links](#)

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02049510 Supplier Number: 19246403 (Use Format 7 Or 9 For FULL TEXT)

Rogue Wave makes code generator customizable. (Object Factory 4.0)(Brief Article)
(Product Announcement)

March 24 , 1997

Word Count: 141 Line Count: 00015

Special Features: illustration; other

Company Names: Rogue Wave Software Inc.--Product introduction

Descriptors: Application Development Software; Software Product Introduction

Product/Industry Names: 7372510 (Software Development Tools)

SIC Codes: 7372 Prepackaged software

Trade Names: Object Factory 2.0 (Application development software)--Product introduction

File Segment: CD File 275

2/8/13 (Item 6 from file: 275) [Links](#)

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01933827 Supplier Number: 18252925 (Use Format 7 Or 9 For FULL TEXT)

Roll your own persistence implementations to go beyond the MFC frontier. (developing a persistence implementation that is not integrated with MFC, but that can coexist with MFC)(Technology Tutorial)(Tutorial)

June , 1996

Word Count: 7336 Line Count: 00593

Special Features: illustration; chart; program

Descriptors: Programming Tutorial; Object-Oriented Programming

SIC Codes: 7372 Prepackaged software

File Segment: CD File 275

2/8/14 (Item 7 from file: 275) Links

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01907005 Supplier Number: 18043501 (Use Format 7 Or 9 For FULL TEXT)

ROGUE WAVE LAUNCHES VISUAL APPLICATION BUILDER, CODE
GENERATOR FOR JAVA, SEEKS RELATIONSHIP WITH SUN.

March 1 , 1996

Word Count: 519 Line Count: 00043

File Segment: CD File 275

2/8/15 (Item 8 from file: 275) [Links](#)

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01777295 Supplier Number: 16897274 (Use Format 7 Or 9 For FULL TEXT)

DB tool developers eye objects; also target multiple platforms for latest product upgrades. (JYACC Inc's JAM for Macintosh and OS/2, Menai Corp's Gamelon 2.0 and TopSpeed Corp's Clarion 1.5)(Product Announcement)

May 1 , 1995

Word Count: 401 Line Count: 00034

Company Names: JYACC Inc.--Product introduction; Menai Corp.--Product introduction; TopSpeed Corp.--Product introduction

Descriptors: DBMS; Programming Utility; Software Product Introduction

Product/Industry Names: 7372510 Computer Language Software ex Military; 7372203

Database Mgmt Software Pkgs

SIC Codes: 7372 Prepackaged software

Trade Names: JAM for Macintosh (DBMS)--Product introduction; JAM for OS/2 (DBMS)-- Product introduction; Gamelon for Windows (Programming utility)--Product introduction; Gamelon for Windows NT (Programming utility)--Product introduction; Gamelon for OS/2 (Programming utility)--Product introduction; Clarion for Windows 1.5 (DBMS)--Product introduction

Operating Platform: Microsoft Windows; Microsoft Windows NT; OS/2; UNIX

File Segment: CD File 275

2/8/16 (Item 9 from file: 275) Links

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01761233 Supplier Number: 16736552 (Use Format 7 Or 9 For FULL TEXT)

INFORMIX TO TAKE THE OBJECT PATH FOR ITS NEW REPOSITORY WITH
VERSANT's OBJECT DATABASE.

March 21 , 1995

Word Count: 229 Line Count: 00018

File Segment: CD File 275

2/8/17 (Item 10 from file: 275) [Links](#)

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01710734 Supplier Number: 16246103 (Use Format 7 Or 9 For FULL TEXT)

MacDraft 4 links drawings to Excel, adds database; revamped interface groups new and old tools in palettes. (Software Review) (Evaluation)

Nov 14 , 1994

Word Count: 1381 Line Count: 00107

Special Features: illustration; table

Company Names: Innovative Data Design Inc.--Products

Descriptors: Evaluation; CAD Software

Product/Industry Names: 7372440 (Graphics Software Pkgs (Micro))

SIC Codes: 7372 Prepackaged software

Trade Names: MacDraft 4.0 (CAD software)--Evaluation

File Segment: CD File 275

2/8/18 (Item 11 from file: 275) [Links](#)

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01702118 Supplier Number: 16236372 (Use Format 7 Or 9 For FULL TEXT)

Eiffel for Windows ships for \$49.95. (Interactive Software Engineering's Personal Eiffel for Windows 3.1 application development software) (Brief Article) (Product Announcement)

Sept , 1994

Word Count: 132 Line Count: 00011

Company Names: Interactive Software Engineering Inc.--Product introduction

Descriptors: Product Introduction; Application Development Software

SIC Codes: 7372 Prepackaged software

Trade Names: Personal Eiffel for Windows (Application development software)--Product introduction; Microsoft Windows 3.1 (GUI)--Computer programs

Operating Platform: Microsoft Windows

File Segment: CD file 275

2/8/19 (Item 12 from file: 275) [Links](#)

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01697446 Supplier Number: 16213528 (Use Format 7 Or 9 For FULL TEXT)

Hewlett-Packard announcements.

August 9 , 1994

Word Count: 994 Line Count: 00085

File Segment: CD File 275

2/8/20 (Item 13 from file: 275) [Links](#)

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01688439 Supplier Number: 15519137 (Use Format 7 Or 9 For FULL TEXT)

Decision support for data warehouses. (Information Advantage's IA Decision Support Suite) (Brief Article) (Product Announcement)

July , 1994

Word Count: 283 Line Count: 00025

Company Names: Information Advantage Inc.--Product introduction

Descriptors: Product Introduction; Decision Support Software; Integrated Software

SIC Codes: 7372 Prepackaged software

Trade Names: IA Decision Support Suite (Decision support software)--Product introduction

File Segment: CD File 275

2/8/21 (Item 14 from file: 275) [Links](#)

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01684101 Supplier Number: 15380532 (Use Format 7 Or 9 For FULL TEXT)

An objective view of ObjectView 3.0. (KnowledgeWare Inc's DBMS applications software) (Application Strategies) (Column) (Software Review) (Evaluation)

June , 1994

Word Count: 2681 Line Count: 00228

Company Names: KnowledgeWare Inc.--Products

Descriptors: DBMS; Application Development Software; Evaluation

SIC Codes: 7372 Prepackaged software

Ticker Symbols: KNOW

Trade Names: ObjectView 3.0 (Application development software)--evaluation

Operating Platform: Microsoft Windows

File Segment: CD File 275

2/8/22 (Item 15 from file: 275) [Links](#)

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01613921 Supplier Number: 13901763 (Use Format 7 Or 9 For FULL TEXT)

Tools and utilities. (software packages that help database developers prototype and design applications, query, and create help systems, among other uses) (1993 Database Buyer's Guide Special Issue) (Buyers Guide)

June 15 , 1993

Word Count: 45702 Line Count: 03876

Descriptors: DBMS; Applications Programming; Application Development Software; Directories; Computer Software Industry; Disk/Tape File Utilities; Program Testing Software; Documentation; Screen Generators/Formatters; Computer-Aided Software Engineering; File Format Conversion Software; File Transfer; Desktop Utility; Program Editor; Disk/File Management Software; Online Help File; Program Library; Query Processing; Report Generation Software
SIC Codes: 7372 Prepackaged software
File Segment: CD File 275

2/8/23 (Item 16 from file: 275) [Links](#)

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01591624 Supplier Number: 13667503 (Use Format 7 Or 9 For FULL TEXT)

The road to objects: object orientation represents a fundamental change in thinking,
and a lot of hard work. (On the Front End) (Column)

April , 1993

Word Count: 2680 Line Count: 00213

Descriptors: Object-Oriented Programming; Client/Server Architecture; Applications
Programming; Program Development Techniques; Programming Instruction

File Segment: CD File 275

2/8/24 (Item 17 from file: 275) [Links](#)

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01591376 Supplier Number: 13665535 (Use Format 7 Or 9 For FULL TEXT)

HyperDesk bolsters object-management tool set. (HyperDesk Corp. to ship upgrade to HyperDesk Distributed Object Management System) (HD DOMS 1.1) (Product Announcement)

March 29 , 1993

Word Count: 337 Line Count: 00027

Special Features: illustration; chart

Company Names: HyperDesk Corp.--Product introduction

Descriptors: Product Introduction; Application Development Software

SIC Codes: 7372 Prepackaged software

Trade Names: HyperDesk Distributed Object Management System 1.1 (Program development software)--Product introduction

Operating Platform: MS Windows; UNIX

File Segment: CD File 275

2/8/25 (Item 18 from file: 275) [Links](#)

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01519920 Supplier Number: 12211940 (Use Format 7 Or 9 For FULL TEXT)

What Xbase code generator should you use? (includes related templates directory)

April , 1992

Word Count: 4830 Line Count: 00464

Descriptors: Code Generator; Guidelines; DBMS; Software Packages; Applications
Programming; Program Development Techniques; Application Development Software
SIC Codes: 7372 Prepackaged software

Trade Names: Genifer (Database application development software)--Design and
construction; Rad (Program development software)--Design and construction; SoftCode
(Database application development software)--Design and construction

File Segment: CD File 275

2/8/26 (Item 19 from file: 275) [Links](#)

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01477461 Supplier Number: 11762072

Programming under System 7.0. (Macinations) (Column)

Jan , 1992

Special Features: illustration; table

Company Names: Symantec Corp.--Products; TGS Systems--Products

Descriptors: Programming; Low Cost; Application Development Software; Operating System

SIC Codes: 7372 Prepackaged software

Trade Names: Apple Macintosh (680X0-based system)--Computer programs; System 7.0 (Operating system)--Computer programs; Think Pascal 4.0 (Program development software)--Usage; Prograph 2.5 (Program development software)-- Usage

Operating Platform: Apple Macintosh

File Segment: CD File 275

2/8/27 (Item 20 from file: 275) [Links](#)

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01446986 Supplier Number: 11205151 (Use Format 7 Or 9 For FULL TEXT)

Inherit the window. (Software Review) (Turbo Vision for C++ v. 1.0 from Borland International and POET database from BKS Software GmbH) (evaluation)

Sept , 1991

Word Count: 1009 Line Count: 00080

Special Features: illustration; table

Company Names: Borland International Inc.--Products; BKS Software GmbH--Products

Descriptors: Evaluation; Program Library; Program Generators; Application Development

Software; Applications Programming Interface; Object-Oriented Programming; Database

SIC Codes: 7372 Prepackaged software

Ticker Symbols: BORLN

Trade Names: Turbo Vision for C++ (Program development software)--evaluation; POET (Data base)--evaluation

Operating Platform: MS-DOS; MS Windows; NeXT

File Segment: CD File 275

2/8/28 (Item 21 from file: 275) [Links](#)

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01446929 Supplier Number: 11047844 (Use Format 7 Or 9 For FULL TEXT)

Reuse implies Eiffel. (Applied Logic Research's Eiffel, an object-oriented programming language) (technical)

June , 1991

Word Count: 2984 Line Count: 00220

Special Features: illustration; program

Company Names: Applied Logic Systems Inc.--Products

Descriptors: Object-Oriented Languages; Program Development Techniques; Software

Design; Object-Oriented Programming

SIC Codes: 7372 Prepackaged software

Trade Names: Eiffel (Application development software)--Design and construction

File Segment: CD File 275

2/8/29 (Item 22 from file: 275) [Links](#)

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01446928 Supplier Number: 11046824 (Use Format 7 Or 9 For FULL TEXT)

An old friend in new clothes. (Microsoft Corp's Visual Basic program development software) (Software Review) (evaluation)

June , 1991

Word Count: 2557 Line Count: 00184

Company Names: Microsoft Corp.--Products

Descriptors: Evaluation; Application Development Software

SIC Codes: 7372 Prepackaged software

Ticker Symbols: MSFT

Trade Names: Microsoft Windows 3.0 (GUI)--evaluation; Microsoft Visual Basic (Application development software)--evaluation

Operating Platform: MS Windows

File Segment: CD File 275

2/8/30 (Item 23 from file: 275) [Links](#)

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01445383 Supplier Number: 11134535 (Use Format 7 Or 9 For FULL TEXT)

Mozart GUI for Windows. (graphical user interface) (Mozart Systems Corp.'s Mozart 3.0) (product announcement)

August , 1991

Word Count: 202 Line Count: 00016

Company Names: Mozart Systems Corp.--Product introduction

Descriptors: Application Development Software; GUI; Product Introduction

SIC Codes: 7372 Prepackaged software

Trade Names: Mozart 3.0 (Program development software)--Product introduction

File Segment: CD File 275

2/8/31 (Item 24 from file: 275) [Links](#)

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01431974 Supplier Number: 10771643 (Use Format 7 Or 9 For FULL TEXT)

Interleaf explains its active document technology as it brings in Interleaf release 5.

May 21 , 1991

Word Count: 895 Line Count: 00073

Company Names: Interleaf Inc.--Products

Descriptors: DTP Software; Information Resources Management; Upgrading; Hypertext;

Text Processing Software

SIC Codes: 7372 Prepackaged software

Ticker Symbols: LEAF

Trade Names: Interleaf 5.0 (DTP software)--Design and construction

Operating Platform: TCP/IP

File Segment: CD File 275

2/8/32 (Item 25 from file: 275) [Links](#)

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01429239 Supplier Number: 10701974 (Use Format 7 Or 9 For FULL TEXT)

Enterprise-wide software engineering "can mean Unix rather than AD/Cycle."

May 13 , 1991

Word Count: 987 Line Count: 00083

Company Names: Interactive Development Environments Inc.--Product development

Descriptors: UNIX; Product Development; Application Development Software; Computer-Aided Software Engineering

SIC Codes: 7371 Computer programming services; 7372 Prepackaged software

Operating Platform: UNIX

File Segment: CD File 275

2/8/33 (Item 26 from file: 275) [Links](#)

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01422124 Supplier Number: 10452217 (Use Format 7 Or 9 For FULL TEXT)

A tour of the Lotus add-in toolkit. (Software Review) (Lotus Development Corp. Add-In-Toolkit for 1-2-3 Release 3.0; Add-In Toolkit for 1-2-3 Release 3.1) (evaluation)

April 16 , 1991

Word Count: 641 Line Count: 00045

Company Names: Lotus Development Corp.--Products

Descriptors: Add-In/On Software; Application Development Software; Spreadsheet Software; Evaluation

SIC Codes: 7372 Prepackaged software

Ticker Symbols: LOTS

Trade Names: Add-In Toolkit for Lotus 1-2-3 3.0 (Program development software)--evaluation; Add-In Toolkit for Lotus 1-2-3 3.1 (Program development software)--evaluation

File Segment: CD File 275

2/8/34 (Item 27 from file: 275) [Links](#)

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01420574 Supplier Number: 10425992 (Use Format 7 Or 9 For FULL TEXT)

Forum dress rehearsal: behind the scenes.(includes a related article on the format followed by the Forum, and a related article on the purpose of office automation)
(director's script for the 1991 platforms for Computing Forum)

Feb 25 , 1991

Word Count: 14754 Line Count: 01160

Special Features: illustration; table

Descriptors: Office Automation; Work Group Computing; Analysis; Networks; Information

Resources Management; Conferences and Meetings; Notebook Computer

File Segment: CD File 275

2/8/35 (Item 28 from file: 275) [Links](#)

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01387527 Supplier Number: 09715079 (Use Format 7 Or 9 For FULL TEXT)

Constructing a compact disk library with ToolBook. (Asymetrix Corp.'s program development software) (Power Programming) (Column) (tutorial)

Dec 25 , 1990

Word Count: 1619 Line Count: 00125

Descriptors: Object-Oriented Programming; Tutorial; Database Design; Compact Disk; Software packages

SIC Codes: 7372 Prepackaged software

Trade Names: ToolBook (Application development software)--Usage

Operating Platform: MS Windows

File Segment: CD File 275

2/8/36 (Item 29 from file: 275) [Links](#)

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01362226 Supplier Number: 08168088 (Use Format 7 Or 9 For FULL TEXT)

FoxPro: dBASE without tears. (Fox Software's FoxPro dBASE clone) (Software Review) (evaluation)

Feb , 1990

Word Count: 3731 Line Count: 00274

Company Names: Fox Software Inc.--Products

Descriptors: Data Base Languages; Compiler; Compatible Software; Evaluation; DBMS

SIC Codes: 7372 Prepackaged software

Trade Names: Microsoft FoxPro (Database application development software)--evaluation

File Segment: CD File 275

2/8/37 (Item 30 from file: 275) [Links](#)

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01362052 Supplier Number: 08595744 (Use Format 7 Or 9 For FULL TEXT)

IBM Announcements. (Device Support Facilities Release 12 available) (IBM discounts Computer-Aided Engineering Design System for users of discontinued RT)

June 22 , 1990

Word Count: 1065 Line Count: 00088

Company Names: International Business Machines Corp.--Product enhancement

Descriptors: Enhancements; Computer-Aided Engineering; Price Cutting; Disk/Tape File Utilities

SIC Codes: 3571 Electronic computers; 7372 Prepackaged software

Ticker Symbols: IBM

Trade Names: Device Support Facilities 12.0 (Data center management software)--Product enhancement; Computer-Aided Engineering Design System 3.0 (CAE software)-- Prices and rates

File Segment: CD File 275

2/8/38 (Item 31 from file: 275) [Links](#)

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01296223 Supplier Number: 07588447 (Use Format 7 Or 9 For FULL TEXT)

Ada tools mature, but users debate language standards. (includes related article on Ada's standard features) (technical)

May 1 , 1989

Word Count: 3497 Line Count: 00279

Special Features: illustration; chart

Descriptors: ADA; Real-Time System; Distributed Systems; Programming Language; Standard; Debugging; Compiler; Application Development Software; Upgrading; User Survey; Technology

SIC Codes: 7372 Prepackaged software

Programming Language: Ada

File Segment: CD File 275

2/8/39 (Item 32 from file: 275) [Links](#)

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01285074 Supplier Number: 07262043 (Use Format 7 Or 9 For FULL TEXT)

Tech releases: software development. (product announcement)

Feb , 1989

Word Count: 1498 Line Count: 00127

Descriptors: Product Introduction; Software packages; Emulators; Application Development
Software; UNIX; User Interface; Debugging Tools; OS/2

SIC Codes: 7372 Prepackaged software

File Segment: CD File 275

2/8/40 (Item 33 from file: 275) [Links](#)

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01252518 Supplier Number: 06833377 (Use Format 7 Or 9 For FULL TEXT)

Article finder. (index) (EDGE Report)

June , 1988

Word Count: 50668 Line Count: 04386

SIC Codes: 3699 Electrical equipment & supplies, not elsewhere classified

File Segment: TI File 148

? s generating(s) object(s) library(s) data
209709 GENERATING
148727 OBJECT
159222 LIBRARY
2391430 DATA
S5 14 S GENERATING(S) OBJECT(S) LIBRARY(S) DATA

? t s5/free/1-14

5/8/1 (Item 1 from file: 15) [Links](#)

ABI/Inform(R)

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00647861 92-62801

****USE FORMAT 7 OR 9 FOR FULL TEXT****

Windows Forms Processing

Word Count: 1421 Length: 7 Pages

Nov 2, 1992

Company Names:

Delrina Technology Inc

JetForm Corp

Geographic Names: US

Descriptors: Software reviews; Performance evaluation; Forms management ; Automation;

Applications; Functions; Ratings & rankings

Classification Codes: 5240 (CN=Software & systems); 9120 (CN=Product specific); 9190 (CN=United States)

5/8/2 (Item 1 from file: 9) [Links](#)

Business & Industry(R)

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04202595 Supplier Number: 161018867 (USE FORMAT 7 OR 9 FOR FULLTEXT)

Modern IDEs bring new meaning to 'integrated&apos.

March 26, 2007

Word Count: 1425

Concept Terms: All market information; All product and service information; Applications;
Trends

Geographic Names: North America (NOAX); United States (USA)

5/8/3 (Item 2 from file: 9) [Links](#)

Business & Industry(R)

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00574163 Supplier Number: 23074419 (USE FORMAT 7 OR 9 FOR FULLTEXT)

Mil DSP tools go commercial

November 07, 1994

Word Count: 303

Company Names: LORAL CORP

Industry Names: Applications software; Software

Product Names: Manufacturing, engineering or design software packages (737272)

Concept Terms: All product and service information; Product introduction

Geographic Names: North America (NOAX); United States (USA)

5/8/4 (Item 1 from file: 275) [Links](#)

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03212739 Supplier Number: 161018867 (Use Format 7 Or 9 For FULL TEXT)

Modern IDEs bring new meaning to 'integrated'(integrated design environment)

March 26 , 2007

Word Count: 1612 Line Count: 00135

Geographic Codes/Names: 1USA United States

Descriptors: Embedded system; System on a chip; Electronic design automation; Integrated circuit fabrication; Market trend/market analysis; Technology application

Event Codes/Names: 010 Forecasts, trends, outlooks

File Segment: CD File 275

5/8/5 (Item 2 from file: 275) [Links](#)

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02505645 Supplier Number: 74991729 (Use Format 7 Or 9 For FULL TEXT)

A Better Connection.(Ontos ObjectSpark 4.1.1)(Product Information)

May 7 , 2001

Word Count: 1257 Line Count: 00110

Company Names: Ontos Inc.--Products

Descriptors: Object-oriented programming; DBMS; Product description/specification

Product/Industry Names: 7372421 (DBMS)

SIC Codes: 7372 Prepackaged software

NAICS Codes: 51121 Software Publishers

Trade Names: Ontos ObjectSpark 4.1.1 (DBMS)--Usage; Ontos ObjectSpark 4.5 Beta (DBMS)-- Product introduction

File Segment: CD File 275

5/8/6 (Item 3 from file: 275) Links

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02038569 Supplier Number: 19146616 (Use Format 7 Or 9 For FULL TEXT)

HEWLETT-PACKARD AND SANTA CRUZ TOUT NEW LODI APPLICATION
INTERFACES FOR UNIFIED UNIX 98.

Feb 21 , 1997

Word Count: 618 Line Count: 00049

File Segment: CD File 275

5/8/7 (Item 4 from file: 275) [Links](#)

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01911793 Supplier Number: 18089301 (Use Format 7 Or 9 For FULL TEXT)

No-sweat database design. (Wall Data's Salsa for the Desktop DBMS) (includes related article on Salsa's etymology) (Software Review)(Evaluation)

March 11 , 1996

Word Count: 1008 Line Count: 00081

Special Features: illustration; chart

Company Names: Wall Data Inc.--Products

Descriptors: DBMS; Software Single Product Review

Product/Industry Names: 7372420 (Database Mgmt Software Pkgs (Micro))

SIC Codes: 7372 Prepackaged software

Ticker Symbols: WALL

Trade Names: Salsa for the Desktop (DBMS)--Evaluation

File Segment: CD File 275

5/8/8 (Item 5 from file: 275) [Links](#)

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01815791 Supplier Number: 17289900 (Use Format 7 Or 9 For FULL TEXT)

An object-oriented approach to test data generation.(object-oriented methodology testing model)(Technical)

May , 1995

Word Count: 2332 Line Count: 00194

Special Features: illustration; other

Descriptors: Technology Information; Object-Oriented Programming; Technology Overview

File Segment: CD File 275

5/8/9 (Item 6 from file: 275) Links

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01710734 Supplier Number: 16246103 (Use Format 7 Or 9 For FULL TEXT)

MacDraft 4 links drawings to Excel, adds database; revamped interface groups new and old tools in palettes. (Software Review) (Evaluation)

Nov 14 , 1994

Word Count: 1381 Line Count: 00107

Special Features: illustration; table

Company Names: Innovative Data Design Inc.--Products

Descriptors: Evaluation; CAD Software

Product/Industry Names: 7372440 (Graphics Software Pkgs (Micro))

SIC Codes: 7372 Prepackaged software

Trade Names: MacDraft 4.0 (CAD software)--Evaluation

File Segment: CD File 275

5/8/10 (Item 7 from file: 275) [Links](#)

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01695241 Supplier Number: 16180022 (Use Format 7 Or 9 For FULL TEXT)

IBM previews data modeling tools for OS/2, Windows.

August 8 , 1994

Word Count: 480 Line Count: 00039

Company Names: International Business Machines Corp.--Product development

Descriptors: Application Development Software; Product Development

Product/Industry Names: 7372510 (Computer Language Software ex Military)

SIC Codes: 7372 Prepackaged software

Ticker Symbols: IBM

Trade Names: OBJ Chart (Application development software)--Product development

Operating Platform: Microsoft Windows; OS/2

File Segment: CD File 275

5/8/11 (Item 8 from file: 275) [Links](#)

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01613921 Supplier Number: 13901763 (Use Format 7 Or 9 For FULL TEXT)

Tools and utilities. (software packages that help database developers prototype and design applications, query, and create help systems, among other uses) (1993 Database Buyer's Guide Special Issue) (Buyers Guide)

June 15 , 1993

Word Count: 45702 Line Count: 03876

Descriptors: DBMS; Applications Programming; Application Development Software; Directories; Computer Software Industry; Disk/Tape File Utilities; Program Testing Software; Documentation; Screen Generators/Formatters; Computer-Aided Software Engineering; File Format Conversion Software; File Transfer; Desktop Utility; Program Editor; Disk/File Management Software; Online Help File; Program Library; Query Processing; Report Generation Software
SIC Codes: 7372 Prepackaged software
File Segment: CD File 275

5/8/12 (Item 9 from file: 275) [Links](#)

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01529483 Supplier Number: 12439374 (Use Format 7 Or 9 For FULL TEXT)

Desktop database strategy. (special advertising supplement from Software Publishing Corp.; includes related articles on how four companies used the Superbase data base management system to development applications)

August , 1992

Word Count: 2469 Line Count: 00216

Special Features: illustration; table; chart; graph

Company Names: Software Publishing Corp.--Product development

Descriptors: Search Software; Program Library; Connectivity; SQL; Strategic Planning;

Product Development; Relational Data Base Management Systems

SIC Codes: 7372 Prepackaged software

Ticker Symbols: SPCO

Trade Names: Superbase 4 1.3 (Data base management system)--Product development;

Superbase SQL Library (Add-in/on software)--Product development; InfoAlliance 1.1

(Search software)--Product development

Operating Platform: OS/2; UNIX; MS-DOS; MS Windows

File Segment: CD File 275

5/8/13 (Item 10 from file: 275) [Links](#)

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01476008 Supplier Number: 12040426

A small Trellis programming project. (Trellis Object System)(object-oriented programming) (Tutorial)

March-April , 1992

Special Features: illustration; program

Company Names: Digital Equipment Corp.--Products

Descriptors: Object-Oriented Programming; Prototype; Tutorial; Compiler; Application

Development Software; Programming Instruction

SIC Codes: 3571 Electronic computers; 7372 Prepackaged software

Ticker Symbols: DEC

Trade Names: DEC Trellis Object System (Program development software)--Usage

File Segment: CD File 275

5/8/14 (Item 11 from file: 275) [Links](#)

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01319793 Supplier Number: 08013374 (Use Format 7 Or 9 For FULL TEXT)

Four for two. (Software Review) (Easel development tool for OS/2 Presentation Manager) (evaluation)

Nov , 1989

Word Count: 1145 Line Count: 00087

Special Features: illustration; program

Company Names: Interactive Images Inc.--Products

Descriptors: Application Development Software; Software Packages; Evaluation

SIC Codes: 7372 Prepackaged software

Trade Names: Easel (Program development software)--evaluation

Operating Platform: OS/2

File Segment: CD File 275

? TYPE 1815791/full from 275

1815791/9 (Direct type from file: 275) [Links](#)

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01815791 Supplier Number: 17289900 (This Is The FULL TEXT)

An object-oriented approach to test data generation.(object-oriented methodology testing model)(Technical)

Conroy, Art

Enterprise Systems Journal , v10 , n5 , p64(3)

May , 1995

Document Type: Technical

ISSN: 1053-6566

Language: English Record Type: Fulltext; Abstract

Word Count: 2332 Line Count: 00194

Abstract: Object-oriented data generation methodology shortens transition time between procedural coding and event programming, enabling development groups to create new and sophisticated applications in shorter time spans. The model, divided into three parts, software engine, specifications and the data-fill types and associated library types, allows for unlimited possibilities in generating data. In addition, features such as modular and open designs allow for component upgrading, modification and unlimited language specification. The design of the model is also application-independent that is, file attributes are set by the user, and portable taking advantage of C. These features grant the module certain advantages such as early design phase testing, performance testing of the module under stress loading, and collection of feedback from the user community.

Text:

Generating test data has always been a problem. There is no easy way. From the moment you begin building a new application, a problem lies in wait -- the application must be populated with live data to see what really happens. The more sophisticated the application, the better the chances are that testing falls through the cracks. After all, there is the deadline. Something has to go. Fixing bugs in production has always worked in the past.

Rapid application development is enabling programs to reach the implementation phase in record time. The pressure is on and the old ways of gathering test data just do not measure up in today's environment.

Traditional methods for creating test data include:

- * Copying production data
- * Extracting production data
- * Manually entering the data from external sources
- * Writing programs to generate data.

These methods are time-consuming, limited in scope, expensive and not easily migrated to another application. Which comes first, the chicken or the egg? If the data does not exist, how do you create a million customer records out of thin air? If the data does exist, it is often inaccessible to the programming staff due to a number of reasons.

- * The data is of a confidential nature (medical, legal, defense, financial and personnel files).

- * The data simply does not exist yet (often the case with new applications).

- * Production and resource limitations prevent using existing data.

- * The data is classified (the case with government contractors).

- * The application is being migrated but the existing data structures cannot be migrated,

Object-Oriented Data Generation

The lack of any methodology for generating data quickly, easily and accurately led to the development of an object-oriented data generation methodology in cooperation with Dr. Marvin Moody, a consultant and adjunct professor in Computer Science at the University of Colorado (Boulder, CO).

This methodology is based on the concept of treating data values as descriptive objects. These objects, called data-fill types, describe a piece of data by its content, not its structure. Rather than limit the user to things such as INT, LONG, CHAR or DATE, the data-fill object is a last name, an address, a part number, an account balance, a job title and so on. This approach led to the development of an object-oriented data generation engine that generates data values in a matter of minutes.

Surprisingly, the reaction from experienced programmers first exposed to the process was, "You can't do that!" or, "How can you create data out of thin air; it's impossible." On the other hand, first-year computer

science students embraced the concept immediately. Creating realistic test data for any application has always been a problem. Now, a programmer can build a business application and fill it with several million records in less time. Simulating an actual production environment is easier. Terms such as throughput, response time and bottleneck become actual events. By thinking about data values as a descriptive type rather than a data type, generating test data can actually be fun.

The Model

The model for object-oriented data generation methodology has three parts. The core is the software engine, which contains the programmatic logic and algorithms. The engine processes a specification, a description of the output file that describes the record and field structures. There are also the data-fill types and their associated library of values created to make it easy for users to select and describe an output value. Rather than think about data as data-types in the traditional sense, data is described by its properties and characteristics. Examples of data-fill types include:

- * NAMEL - last names
 - * CITUS - U.S. cities
 - * PHONE - a 10-digit phone number
 - * DAYMD - an eight-digit date displayed as YY/MM/DD
 - * STATA - State abbreviations
 - * GENDR - male/female gender designations
 - * STAMP - DB2 timestamp
 - * DUNIX - UNIX-formatted system date and time
 - * RANDA - Random alphabetic characters
 - * INTER - Positive and negative integers.
- The library contains dozens of data-fill types and includes

the capability for users to define custom data-fill types through user-defined values. This makes the possibilities for generating data unlimited. Users have the flexibility to generate just what they need and no more. This approach has important implications for every phase in the development cycle. In the analysis and design phases, questions about data values can be tested up front. In the coding phase, data can be quickly generated to

test specific functions and modules. During unit testing, performance issues can be tested and decisions can be made about the capabilities and limitations of the hardware environment. In the testing and debugging phase, production databases can be created from scratch and full simulations can be run prior to migration to production.

In the specification itself, users can define such things as:

- * The output file name
- * The number of records to be generated
- * The record structure (variable or fixed)
- * The record and field delimiters.

For each field in the specification, users can describe how the values

are to be generated, including:

- * Position
- * Column/field name
- * Data type
- * Data-fill type
- * Sequence (random or sequential)
- * Bounds (lower and upper)
- * Interval (numeric interval between generations)
- * Repeat value (how many times does the value repeat

itself?)

- * Frequency distribution
- * Decimal places
- * Interfield dependencies
- * Seed values (values for predicting random generation

patterns).

Armed with these property settings, many of the most complicated data generation sequences can be completed in a few minutes. Integrated into the application development process, anyone can generate data at any stage, incorporating testing at the earliest stages of the development cycle.

Because the data is generated from a specification, the only thing that needs to be saved is the specification, not the data. Once the test data has been used, it can be deleted. The seed values in the specification ensure the same random sequences can be re-created.

Another important characteristic of the model is the fact that the generation output is a data value, not a data type. This allows the engine to take advantage of the hardware architecture and output data in EBCDIC or ASCII format. A single engine can provide data for any application. The application import and load functions handle the internal data

structures.

The generated data has objective application, since all languages have a method for creating sequential data import processes. These characteristics

of the model make this methodology objective in its implementation. Whether the target application is DB2, IMS, Oracle, Access, COBOL or any other program, there is a method for loading data into the application.

There are other features of the model that make it easy to modify for different environments.

- * The design is modular. The generation engine is separate from the data-fill types, the specification and the data tables. The components can be upgraded and modified for any country and language.

- * The design is open. The specification can be created in any language, providing an Application Programming Interface (API) to any application or programming language.

- * The design is application-independent. The output is either in EBCDIC or ASCII, enabling most applications to load or import the data.

File attributes and delimiters are set by the user. Files can contain multiple record formats.

- * The design is portable. It takes advantage of the strengths and popularity of C. The engine can be implemented on any system that has a C compiler. The specifications can be created on any client no matter what the operating system or hardware and then be transferred to the server or host for generation.

The Need For Change

Data generation is not a new problem. In fact, beginning with computer programming classes, the lack of realistic data has always been the Achilles' heel of programming. How often do you "ditty up" a data file with a dozen or so records to pass through the application? Do you remember the temps brought in for a week to copy data from source documents? Most of the problems associated with the traditional methods of creating test data are a thing of the past with object-oriented data generation methodology.

There are other changes also driving the need for a new data

generation paradigm. With the rapid transition from procedural coding to event-driven programming, development groups can create new and sophisticated applications in a fraction of the time it used to take. Along with this rapid development comes the need for a better way to generate realistic test and production data.

Why? Because data can pass through and be manipulated by many more subsystems than before. A piece of data can now pass from a GUI interface, through programmatic logic, out to a data server, on to a communications link and network, up to the mainframe, into a data warehouse and back. Questions about application performance and data integrity take on new importance. How much data needs to go? How fast will it be transmitted? What is the throughput? What about sort times? What about refresh rates? What about rollback? What about bottlenecks? What about indexing? How long will a query take? Do the forms and reports provide accurate values? Can the data be presented graphically? Is there enough horsepower to drive the application? Can you put 10 tons of mainframe data onto a 50-node LAN? What about RAM on the clients? What about disk space on the server? The questions are as numerous and different as each application.

This methodology is proving successful in many companies. A medical company in Boulder, Colorado uses this methodology to generate and test data for its medical information software package. A Dallas-based company can now create realistic data for unit testing without depending on its client base for assistance. Several San Francisco-based companies combine existing data and newly generated data to test applications migrating to client/server. In each case, the traditional methodologies of creating data were replaced with the object-oriented data generation engine. An example using this methodology follows.

Example

You need a file with 15 fields. The file is comprised of variable-length records; each field must be separated by a comma. You need 200,000 of these records. You need fields with last name, first

name,
middle initial, gender, date of birth, Social Security number,
phone
number, client number, beginning balance, date, time, account
type, account
location, current balance and teller ID. The specification is
shown in
Example 1. The output for this specification is shown in Example
2.

What would take days to code from scratch, including
assembling all
the random values required for things such as names and
addresses, takes
less than five minutes to accomplish with this methodology. If a
change
needs to be made, it takes only a few keystrokes and the
generation is
rerun.

Advantages

There are many advantages to using such an approach to
application
development. In programming classes, students of any application
language
can now produce realistic data files of significant size to
experience the
problems faced in production environments. In the test and
generation
process, users can save the specification and discard the test
data after
it has been used. If the data needs to be used again, the
specification can
be rerun. The randomness of the output can be controlled through
the use of
seed values. A department can maintain a library of test
specifications,
standardizing the testing data and making the data accessible to
anyone
within the department. The generated data can be used to populate
production files in any application. Functional testing of
modules can be
accomplished in the early phases, allowing for what/if analysis
and
benchmarking of procedures. Unit testing can be accomplished
without
dependencies among groups. Each group can create subsets of test
data.
Testing can be done concurrently among development groups with
common
agreement on data-fill types and the specification. User feedback
can be
solicited for the design of screens, forms and reports without
having to
wait for production data. Realistic prototyping using generated
data can
highlight problem areas early on. Most important, stress testing,

modeling,
capacity planning and performance measurement can be performed
using
realistic test data in the volumes that reflect the production
environment.

Considering a single developer or a major I/S shop with
hundreds of
developers, this methodology can mean millions of dollars saved
industrywide. The cost of generating test data is significant.
Just take a
look at a few of the resources involved, including programmers'
time,
machine resources, limitations using production data, limited
testing staff
and different levels of programming skills. This does not include
the costs
of correcting problems after the application has been migrated to
production.

Conclusion

The object-oriented data generation approach has advantages
for anyone
developing applications and programs. First, in being able to
generate data
early in the design phase, the impacts from different data
designs and

dictionaries can be measured. Second, the performance of the
module can be
tested under stress loading. Third, by having actual data to test
with,
valuable feedback can be collected from the user community, long
before the
application reaches the production environment. Finally, data
generation
and testing will not be left to the Quality Assurance and Testing
group.
The object-oriented data generation methodology can be utilized
by every
member of the development team throughout the life cycle of the
project. It
is never too late for a better mousetrap.

ABOUT THE AUTHOR

Art Conroy is a senior developer and co-author of The
Generator from
Mach One Software. He is also an adjunct professor of Computer
Science at
the University of Colorado in Boulder. He has worked for Computer
Associates, Landmark Systems and several other software
development
companies. Mach One Software, 6104 Calm Meadow Rd., Dallas, TX
75248, (800)
336-9969 or CompuServe 73704,2736.

Special Features: illustration; other

Descriptors: Technology Information; Object-Oriented Programming; Technology Overview

File Segment: CD File 275

? Please enter a command or be logged off in 5 minutes
 ? Logoff

Estimated Cost Summary

Project		Client		Charge Code		Searcher		Job		Service Code	Use Num
										51	291
Date		Time		SessionID		Subsession		Subaccount			
03/12/2008		16:07:04		22		3					
Data Base	Dial Units	Access Charge	Print Credit	Types	Prints	Report	Rank	Links	CSS	Total	
15	0.5360	2.99	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2	
9	0.3760	2.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2	
623	0.0560	0.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	
810	0.2350	0.24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	
275	0.6110	3.41	0.00	3.79	0.00	0.00	0.00	0.00	0.00	7	
624	0.2530	1.48	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1	
Sub Totals	2.0670	\$10.55	\$0.00	\$3.79	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$14	
Session Totals	2.4290	\$10.96		Telecom	\$5.06					\$19	

Ended session: 3/12/2008 5:07:06 PM

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